

Zheyuan (Charles) Xu

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EDUCATION

University of Washington

MS in Computer Science

Sep 2020 - Dec 2021

Georgia Institute of Technology

BS in Computer Science and Electrical Engineering (intelligence and theory thread)

Aug 2015 - May 2020

TECHNICAL SKILLS

Languages: Python, C++ (11 or above), C#, SQL, JavaScript, Swift, Java, Matlab, HTML

Frameworks: Cuda, ROS2/ROS, Linux, Flutter, Flask, RabbitMQ, Docker

EXPERIENCE

ADAS/AD Stack Software Engineer

Jan 2022 – present

U Power Robotics

Sunnyvale, CA

- Helped setup simulation pipeline based on open source simulator, enabling verification of AD/ADAS algorithms
- Developed and maintained GPU-based point cloud preprocessing package, reduced pipeline latency by more than 10 times
- Developed point cloud segmentation package for perception stack
- Co-developed radar driver package and waypoint management package for urban autonomy demo

Machine Learning Intern (remote)

Oct 2021 – Dec 2021

Mavenir Systems Inc.

Richardson, TX

- Worked on R&D robotics project that incorporates computer vision and advanced planning algorithms in factory automation

Machine Learning Intern

June 2021 – Sep 2021

RATLab LLC (Startup)

Seattle, WA

- Developed neural network based algorithms for the consumer electronic product with Tensorflow Lite and Pytorch in Python, achieved more than 85% classification accuracy in breathing recognition

Research Assistant

Jan 2020 – Aug 2020

GTSR Lab

Atlanta, GA

- Designed the mechatronics system for GT-MAB 2.0 in Solidworks and Eagle CAD
- Optimized the firmware, and reduced communication latency by more than 150 times with embedded C
- Co-invented two patents, co-authored paper was awarded "Best Student Paper Award" in AIM 2021

SELECTED PROJECTS

A.R.M.S. | Remote warehouse management app deployed on mixed-reality devices

Aug 2021

- Built a digital twin of Dofbot in Unity, trained an autonomous grabbing agent with ML agents and reinforcement learning(PPO)
- Allowed remote control of robotic arm over cloud, as well as streaming of sensor data from the robot to mixed-reality glass via cloud AMQP message broker.

GAIA System | A 3D web app for monitoring natural disasters and monitoring rescue missions

Feb 2021–Apr 2021

- Animated the frontend by using Three.js, WebGL, HTML and CSS
- Implemented information visualization by using Azure VM, RabbitMQ and GCP BigQuery

AdaEye | A voice-controlled navigation and cognitive app for visually impaired

Feb 2021

- Designed the frontend in Swift, allowing voice-only login, registration and scan of surroundings
- Enabled voice control of camera gimbal with RabbitMQ on Azure VM
- Built a chatbot on the frontend, enabling voice query and answer by integrating GPT-3 and AVFoundation

Neomap | An iOS mixed-reality app for share your new year resolution and relive your older memories

Dec 2020

- Enabled gesture control to user posts by integrating gesture detection and Reality Kit in Swift
- Allowed user authentication, data storage and retrieval by integrating Firebase

SELECTED AWARDS

Best Use of Google Cloud - MakeHarvard 2021

Best Use of Google Cloud and Radar.io Most Creative Award - MLH New Year New Hack 2021